REMARKS

Claims 1-25 were previously pending in this patent application. Claims 1-25 stand rejected. Herein, no Claim has been amended. Accordingly, after this Amendment and Response After Final Action, Claims 1-25 remain pending in this patent application. Further examination and reconsideration in view of the claims, remarks, and arguments set forth below is respectfully requested.

35 U.S.C. Section 103(a) Rejections

Claims 1-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Null, U.S. Patent No. 6,130,663 (hereafter Null) in view of Ono, U.S. Patent No. 6,819,436 (hereafter Ono) or Laskowaski, U.S. Patent No. 4,788,441 (hereafter Laskowaski). These rejections are respectfully traversed.

Independent Claim 1 recites:

> "An optical position-tracking system comprising:
> a first light beam steering device for ***sweeping a first light beam*** through a first angular range ***to cause a reflection*** of said first light beam by a target ***back to said first light beam steering device***; and
> a second light beam steering device for ***sweeping a second light beam*** through a second angular range ***to cause a reflection*** of said second light beam by said target ***back to said second light beam steering device***, wherein ***a position of said target is determined*** using a triangulation technique utilizing a first angular value of said first light beam and a second angular value of said second light beam, and wherein said first angular value and said second angular value ***depend on the existence of said respective reflection.***" (emphasis added)

It is respectfully asserted that there is no suggestion, motivation, or teaching found in the cited references (Null, Ono, and Laskowaski) to combine them. Moreover, the combination of the cited references does not teach, suggest, or motivate all the limitations in Independent Claim 1.

It is admitted in the Final Office Action that Null "does not teach that the first and second light beams are reflected to the first and second steering devices respectively." However, it is argued in the Final Office Action that "such arrangements are well known and are widely used for distance measurement for more accurate measurements" and that Ono and Laskowaski teach these arrangements.

Instead of teaching the limitations of Independent Claim 1, Ono and Laskowaski teach away from the invention claimed in Independent Claim 1, clearly demonstrating that the limitations of Independent Claim 1 are not well known and are not widely used and that it would not be obvious to modify Null in view of Ono and Laskowaski. Although the Final Office Action states that "Ono teaches a system for measuring distance using a mirror which scans an area and receives the reflection" and cites Figure 23 of Ono, Ono clearly does not teach such a system. In particular, the mirrors (76, 78) of Figure 23 do not scan but simply reflect light beams (16, 18) that are incident upon the fixed-positioned mirrors (76, 78). [Ono; Figure 23; Col. 23, lines 33-67]. Further, a modulation

unit (82) modulates the intensities of the light beams (16, 18). Id. However, Ono does not disclose any component that sweeps any light beam (16, 18) through an angular range to cause a reflection of the light beam by a target back to the component.

Although the Final Office Action states that "Laskowaski teaches a range finder using scanner 15 that scans in an angular range and receives the reflection" and cites Figure 1 of Laskowaski, Laskowaski clearly does not teach that first and second light beams are reflected to the first and second steering devices respectively for determining the position of a target. In particular, Figures 1-16 of Laskowaski disclose using a single light beam, a single scanning mirror (15), and a single reflected light beam from the target to determine distance to the target, width of the target, or azimuthal position of the target relative to a known azimuthal reference. [Laskowski; Figures 1-16]. However, Figures 1-16 do not teach determining the position of the target using first and second light beams reflected to the first and second steering devices respectively.

Moreover, Figure 17 discloses scanners (11, 11a) to determine position of the object (144) by using the absence of reflected light from the object (144) instead of using reflected light from the object (144). [Laskowski; Figure 17; Col. 12, lines 17-55]. That is, Laskowski teaches away from the invention recited in Independent Claim 1 because Laskowski discloses use of absence of reflected

light from the object (144) to determine position of the object while Independent Claim 1 is directed to use of reflected light from the object to determine position of the object.

Unlike the combination of Null, Ono, and Laskowaski, Independent Claim 1 is directed to an optical position-tracking system. The system of Independent Claim 1 comprises "a first light beam steering device ***for sweeping a first light beam*** through a first angular range to ***cause a reflection*** of said first light beam by a target ***back to said first light beam steering device***". (emphasis added) Further, the system comprises "a second light beam steering device ***for sweeping a second light beam*** through a second angular range to ***cause a reflection*** of said second light beam by said target ***back to said second light beam steering device***". (emphasis added) Continuing, Independent Claim 1 also recites "wherein ***a position of said target is determined*** using a triangulation technique utilizing a first angular value of said first light beam and a second angular value of said second light beam, and wherein said first angular value and said second angular value ***depend on the existence of said respective reflection***". (emphasis added) As described above, the combination of Null, Ono, and Laskowaski do not disclose the cited limitations of Independent Claim 1. Therefore, it is respectfully submitted that Independent Claim 1 is patentable over the combination of Null, Ono, and Laskowaski and is in condition for allowance.

Dependent Claims 2-8 are dependent on allowable Independent Claim 1, which is allowable over the combination of Null, Ono, and Laskowaski. Hence, it is respectfully submitted that Dependent Claims 2-8 are patentable over the combination of Null, Ono, and Laskowaski for the reasons discussed above.

With respect to Independent Claim 9, it is respectfully submitted that Independent Claim 9 recites similar limitations as in Independent Claim 1. In particular, the system of Independent Claim 9 comprises "a first light beam steering device ***for sweeping a first light beam*** through a first angular range to ***cause a reflection*** of said first light beam by a target ***back to said first light beam steering device***". (emphasis added) Further, the system comprises "a second light beam steering device ***for sweeping a second light beam*** through a second angular range to ***cause a reflection*** of said second light beam by said target ***back to said second light beam steering device***". (emphasis added) Continuing, Independent Claim 9 also recites "wherein ***a position of said target*** is determined using a triangulation technique utilizing a first angular value of said first light beam and a second angular value of said second light beam, and wherein said first angular value and said second angular value ***depend on the existence of said respective reflection***". (emphasis added) Therefore,

Independent Claim 9 is allowable over the combination of Null, Ono, and Laskowaski for reasons discussed in connection with Independent Claim 1.

Dependent Claims 10-18 are dependent on allowable Independent Claim 9, which is allowable over the combination of Null, Ono, and Laskowaski. Hence, it is respectfully submitted that Dependent Claims 10-18 are patentable over the combination of Null, Ono, and Laskowaski for the reasons discussed above.

With respect to Independent Claim 19, it is respectfully submitted that Independent Claim 19 recites similar limitations as in Independent Claim 1. In particular, the method of optically tracking a target of Independent Claim 19 comprises "***sweeping a first light beam*** through a first angular range ***at a first location*** and determining a first angular value of said first light beam". (emphasis added) Further, the method of Independent Claim 19 comprises "***sweeping a second light beam*** through a second angular range ***at a second location*** and determining a second angular value of said second light beam". (emphasis added) Continuing, Independent Claim 19 also recites "when said target ***causes a reflection*** of said first and second light beams ***back to said first and second locations respectively, determining a position of said target*** using a triangulation technique utilizing said first and second angular values which ***depend on the existence of said respective reflection***".

(emphasis added) Therefore, Independent Claim 19 is allowable over the combination of Null, Ono, and Laskowaski for reasons discussed in connection with Independent Claim 1.

Dependent Claims 20-25 are dependent on allowable Independent Claim 19, which is allowable over the combination of Null, Ono, and Laskowaski. Hence, it is respectfully submitted that Dependent Claims 20-25 are patentable over the combination of Null, Ono, and Laskowaski for the reasons discussed above.

CONCLUSION

It is respectfully submitted that the above claims, arguments, and remarks overcome all rejections. All remaining claims (Claims 1-25) are neither anticipated nor obvious in view of the cited references. For at least the above-presented reasons, it is respectfully submitted that all remaining claims (Claims 1-25) are in condition for allowance.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

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